

What is claimed is:

- 1 1. A method of fabricating an integrated circuit that includes a
2 microelectromechanical (MEMS) device, comprising:
3 forming a MEMS device on a substrate;
4 forming an integrated circuit; and
5 coupling the substrate to the integrated circuit to form a sealed cavity that
6 includes the MEMS device.
- 1 2. The method of claim 1, wherein coupling the substrate to the integrated
2 circuit includes coupling the substrate to a chip.
- 1 3. The method of claim 1, wherein forming a MEMS device on a substrate
2 includes forming a ring layer on the substrate that surrounds the MEMS device.
- 1 4. The method of claim 3, wherein coupling the substrate to the integrated
2 circuit includes bonding the ring layer to the integrated circuit.
- 1 5. The method of claim 3, wherein the ring layer is electrically conductive.
- 1 6. The method of claim 5, wherein forming a MEMS device on a substrate
2 includes depositing a wettable layer onto the ring layer.
- 1 7. The method of claim 3, wherein forming an integrated circuit includes
2 forming a ring layer on a surface of the integrated circuit.
- 1 8. The method of claim 7, wherein coupling the substrate to the integrated
2 circuit includes bonding the ring layer on the substrate to the ring layer on the
3 integrated circuit.

1 9. The method of claim 8, wherein forming an integrated circuit includes
2 forming solder bumps within the ring layer on the substrate and forming a MEMS
3 device on a substrate includes forming pads on the substrate, and coupling the
4 substrate to the integrated circuit includes bonding the pads on the substrate to the
5 solder bumps on the integrated circuit.

1 10. The method of claim 1, wherein forming an integrated circuit includes
2 forming a ring layer on the substrate.

1 11. The method of claim 10, wherein coupling the substrate to the integrated
2 circuit includes bonding the ring layer to the substrate.

1 12. The method of claim 1, wherein coupling the substrate to the integrated
2 circuit includes coupling the substrate to the integrated circuit in a controlled
3 environment.

1 13. The method according to claim 12, wherein coupling the substrate to the
2 integrated circuit in a controlled environment includes coupling the substrate to the
3 integrated circuit in a hermetic environment.

1 14. The method according to claim 12, wherein coupling the substrate to the
2 integrated circuit in a controlled environment includes coupling the substrate to the
3 integrated circuit in a vacuum.

1 15. A method of fabricating an integrated circuit that includes a
2 microelectromechanical (MEMS) device, comprising:
3 forming a MEMS device on a substrate;
4 forming a ring layer on the substrate that surrounds the MEMS device;
5 forming an integrated circuit;
6 forming a ring layer on a surface of the integrated circuit; and
7 coupling the substrate to the integrated circuit by bonding the ring layer on
8 the substrate to the ring layer on the integrated circuit to form a sealed cavity that
9 includes the MEMS device.

1 16. The method of claim 15, wherein coupling the substrate to the integrated
2 circuit includes coupling the substrate to a chip.

1 17. The method of claim 15, wherein coupling the substrate to the integrated
2 circuit includes coupling the substrate to the integrated circuit in a controlled
3 environment.

1 18. The method of claim 15, wherein the ring layers on the substrate and the
2 integrated circuit are electrically conductive.

1 19. A method of forming a microelectromechanical (MEMS) device,
2 comprising:
3 forming a MEMS device on a substrate; and
4 coupling the substrate to a chip to form a sealed cavity that includes the
5 MEMS device.

1 20. The method of claim 19, wherein forming a MEMS device on a substrate
2 includes forming a ring layer on the substrate that surrounds the MEMS device.

1 21. The method of claim 20, wherein coupling the substrate to the chip includes
2 bonding the ring layer on the substrate to the chip.

1 22. The method of claim 19, wherein coupling the substrate to the chip includes
2 coupling the substrate to the chip in a controlled environment such that sealed cavity
3 becomes a controlled environment.

1 23. An integrated circuit comprising:
2 a body including a MEMS device mounted on a surface of the body, the
3 body including a ring layer on the surface of the body that surrounds the MEMS
4 device; and
5 a substrate bonded to the ring layer on the integrated circuit to seal the
6 MEMS device within a cavity defined by the body, the ring layer and the substrate.

1 24. The integrated circuit of claim 23, wherein the substrate is a chip.

1 25. The integrated circuit of claim 23, further comprising a wettable layer
2 deposited onto the ring layer.

1 26. The integrated circuit of claim 23, wherein the substrate includes a ring layer
2 on a surface of the substrate that is bonded to the ring layer on the body.

1 27. The integrated circuit of claim 26, wherein the substrate includes solder
2 bumps within the ring layer on the substrate, and the body includes pads within the
3 ring layer on the body such that the pads are bonded to the solder bumps.

1 28. The integrated circuit of claim 26, wherein the ring layers on the substrate
2 and the integrated circuit are electrically conductive.